

STRUCTURED COAUTHORING

BACKGROUND

[0001] In multi-user environments, it may be desirable for multiple users be able to edit the same document at the same time. Often, when multiple users are editing the document, confusion can exist as to how the various edits are added to the document. For example, sometimes multiple versions of the document are edited, making it difficult to merge the edits into a single, complete document.

[0002] Even in systems that support multi-user editing of a document, users typically cannot control when the users' edits are shown to others editing the document. Further, it can be difficult to define which user is working on which particular part of the document, thereby resulting in possible conflicts in the changes made to the document.

SUMMARY

[0003] The present disclosure relates to systems and methods for structured coauthoring of a document.

[0004] According to one aspect, a system for structured coauthoring of a document comprises a server including one or more documents, each document being organized into sections, a document permissions module that stores user access permissions for each section of a document, a document update processing module that processes requests from a user to share document updates with other users and that processes requests from a user to receive document updates from other users and a document rendering module that renders a document for display on a client, the document being rendered so that sections of the document are updated with shared document updates made by users, the shared document updates being requested by the user on the client. The user access permissions determine the extent to which a user can modify each section of the document, permitting different user access permissions to be stored for one or more sections of the document. The system permits two or more users to coauthor one or more of the sections of the document so that each user has specific access rights to one or more of the sections of the document, so that the user can specify whether updates made by the user to the one or more sections of the document can be displayed to other users, and so that the user can view the names of other users accessing the one or more sections of the document and can selectively obtain updates to the document from those users.

[0005] According to another aspect, a method for structured coauthoring of a document comprises: opening a document on a client by a user, the document organized into sections, each section representing a part of the document, the document displaying user access permissions for one or more sections of the document and the document displaying the names of users who are editing one or more of the sections of the document; performing operations on one or more sections of the document, the operations being consistent with the user access permissions granted for the one or more sections of the document; identifying updates to the document that can be shared with other users so that the updates to the document are shared with other users; and identifying one or more users from which document updates to one or more of the sections of the document are to be obtained, the one or more users selected from the names displayed on the document, so that the document updates are obtained from the document server and displayed in the appropriate sections of the document.

[0006] According to yet another aspect, a method for coordinating the structured coauthoring of a document at a document server comprises: dividing a document into a plurality of sections, each of the sections including a paragraph of the document; storing user access permissions to each of the sections of the document for a plurality of users of the document, the user access permissions defining an extent to which each of the plurality of users can view, edit and comment on the sections of the document; storing the names of users who are accessing each of the sections of the document; rendering an instance of the document to the users of the document, the rendered document including access controls that indicate user access permissions for each of the sections of the document, the rendered document including the names of the users who are editing each of the sections of the document, the rendered document including action controls providing actions including requesting updates to the sections from the users and designating that updates a user made to the sections are made available to users; storing updates to the document made by the users of the document; receiving a request from a first user to share updates to the document made by the first user with other users; in response to the request from the first user, enabling the document updates made by the first user to be shared with other users; receiving a request from a second user to receive updates to the sections of the document made by other users; and in response to the request from the second user, rendering an instance of the document for the second user that includes the shared updates to the sections requested by the second user, the shared updates being rendered in new document sections located directly above the requested document sections.

[0007] This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

DESCRIPTION OF THE DRAWINGS

[0008] The accompanying drawings incorporated in and forming a part of the specification illustrate several aspects of the present disclosure, and together with the description serve to explain the principles of the disclosure.

[0009] FIG. 1 shows an example system for coauthoring documents.

[0010] FIG. 2 shows a structure of an example document used for coauthoring.

[0011] FIG. 3 shows a portion of an example document for coauthoring.

[0012] FIG. 4 shows an example of displaying document updates from another user for a portion of the example document shown in FIG. 3.

[0013] FIG. 5 shows example modules of an example document server.

[0014] FIG. 6 shows a flowchart for an example method for coauthoring a document.

[0015] FIG. 7 shows a flowchart for an example method for coordinating the coauthoring of documents at a document server.

DETAILED DESCRIPTION

[0016] The present application is directed to systems and methods for structured coauthoring of a document.